

WEINGARTEN, SCHURGIN, GAGNEBIN & LEBOVICI LLP
TEN POST OFFICE SQUARE
BOSTON, MASSACHUSETTS 02109

STANLEY M. SCHURGIN
CHARLES L. GAGNEBIN III
VICTOR B. LEBOVICI
DEVERLY E. HJORTH
HOLLIDAY C. HEINE, Ph.D.
GORDON R. MORIARTY
JAMES F. THOMPSON
DAVID A. DAGG

INTELLECTUAL PROPERTY LAW
PATENTS, TRADEMARKS AND COPYRIGHTS

TELEPHONE
(617) 542-2290
FACSIMILE
(617) 451-0313

THOMAS P. GRODT
RICHARD E. GAMACHE
CHI SUK KIM

OF COUNSEL
ARTHUR S. MORGENSTERN

JOSEPH WEINGARTEN
(1919-1984)

FACSIMILE COVER SHEET

DATE: Aug. 5, 2003

TO: Examiner Cross

Fax No.: 703-305-3599 ⁸⁷²⁻⁹⁵⁰⁴

FROM: Arthur Morgenstern

No. of pages transmitted
(including this page) 8

Our File: CHEMM-101XX

Time:

Your Ref: Ser. No. 09/350,466

Sent by:

A confirmation copy of this transmission will not be mailed unless
the following is checked: []

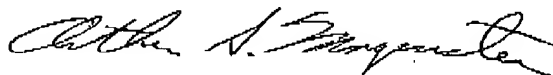
MESSAGE

OFFICIAL

Examiner Cross:

The attached is for our telephone interview scheduled at 1PM today.

Sincerely yours,



Arthur S. Morgenstern
Reg. No. 28,244

THIS MESSAGE MAY CONTAIN CONFIDENTIAL OR PRIVILEGED INFORMATION INTENDED ONLY FOR THE
PERSON(S) IDENTIFIED ABOVE. IF IT HAS BEEN RECEIVED AT ANY OTHER PLACE OR HAS NOT BEEN
CLEARLY RECEIVED, PLEASE CALL THE ABOVE IDENTIFIED SENDING PARTY COLLECT FOR
INSTRUCTIONS. DO NOT SHOW OR DISTRIBUTE THIS MESSAGE TO ANYONE OTHER THAN THE INTENDED
RECIPIENT(S). THANK YOU.

294425

Haas Figure 1

no chemical detection event
no solid in dye layer
time response begins as soon
as 12 & 14 are adhered
dye moves as a result of
presence of activator
(plasticizer)

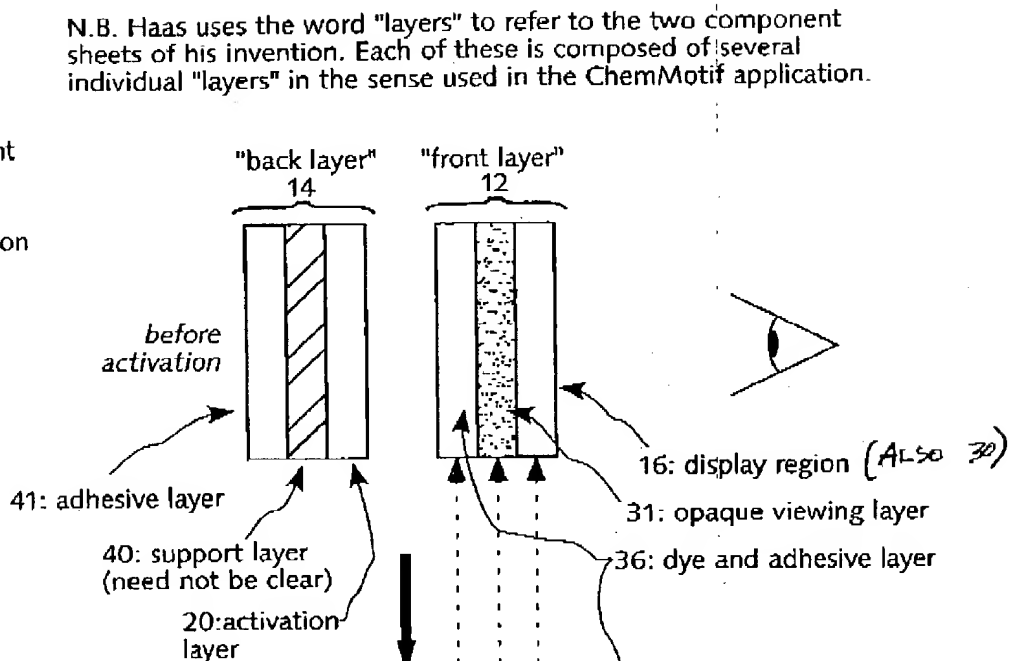


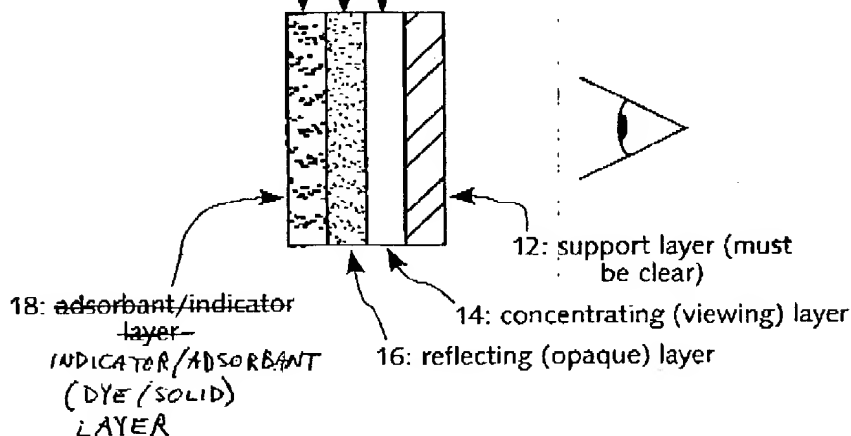
Figure 5 of Haas separates the dye and adhesive into separate layers but is functionally equivalent to Figure 1

after activation

do not correspond!

ChemMotif Figures 1 & 2:

no separate activation layer
stable as single unit until exposed to external analyte
solid adsorbent in dye layer is critical component in desorption process
dye is immobile in presence of plasticizer/solvent until analyte causes dye desorption
Neither Haas nor Burleigh contemplate a competitive adsorption/desorption process as a chemical sensing mechanism



INSTANT APPLICATION CORRESPONDING LAYER:

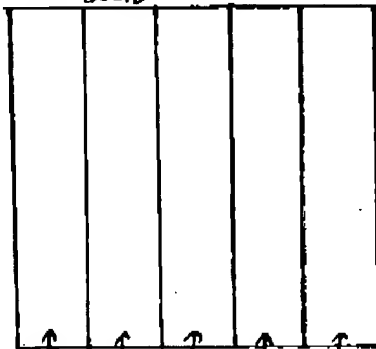
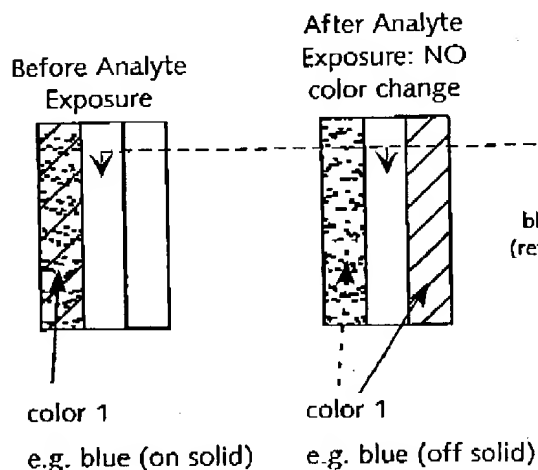
X WITH 18
SOLID 16 X 12+14HAAS FIGURE 5
NUMBERING

FIGURE A

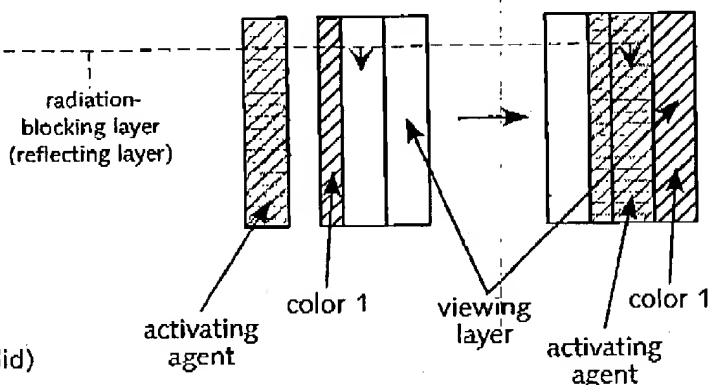
Summary of Detection Mechanisms

| reference | dye desorbable by target analyte | solid present in dye layer | presence of plasticizer <i>causes</i> dye migration | detects elapsed time | detects chemical analyte |
|------------------------|---|-------------------------------|--|-------------------------|--------------------------------|
| instant application | Y | Y | N | N | Y |
| Haas | N | N | Y | Y | N |

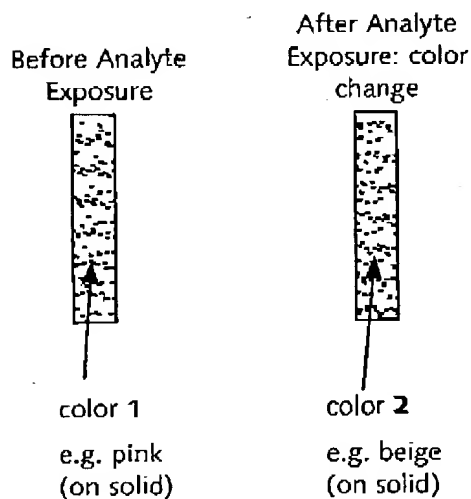
ChemMotif invention: analyte class sensing involves **no** chemical change—solid adsorbent is not merely support for indicator but is fundamental component of detection process



Haas: cause for dye movement is adhering of activating agent layer to rest of composition; no analyte is measured, only time & temperature. In relation to the ChemMotif sensor, Haas is responding to the presence of plasticizer; not the presence of an analyte



Burleigh: analyte **reaction** produces color change; single layer; solid support present but **not** involved in detection process



Burleigh + Haas:

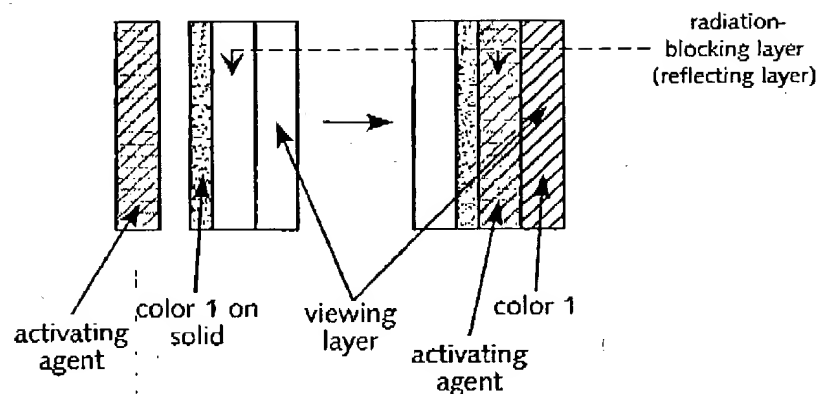
Case 1: dye on solid is mobilized by plasticizer, in which case no analyte detection can take place since dye moves to viewing layer independent of presence of analyte when activating layer containing plasticizer is mated with it

Case 2: dye on solid is not mobilized by plasticizer before or after reaction with analyte; no transfer of dye to viewing layer occurs

Case 3: dye on solid is not mobilized by plasticizer until reaction occurs; chemical **reaction** with analyte is required for mobilization; desorption is caused by plasticizer, not analyte; solid support is present but **not** involved in detection process

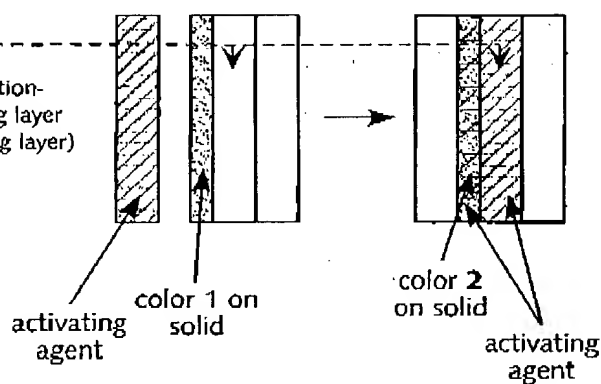
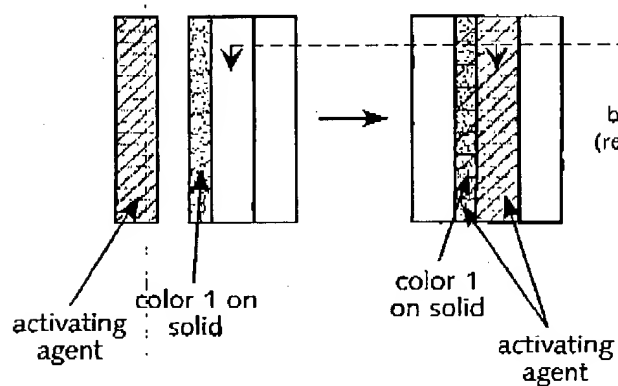
(Figures next page)

Case 1: with or without analyte exposure



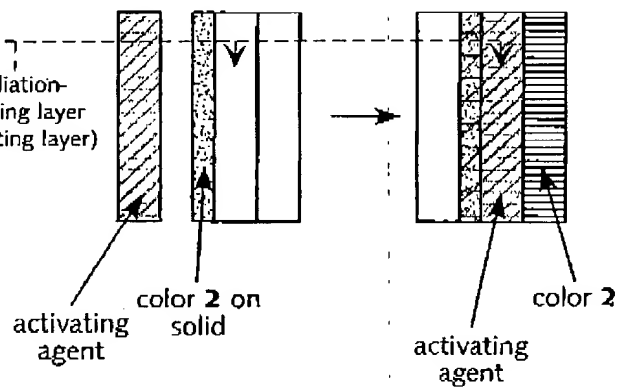
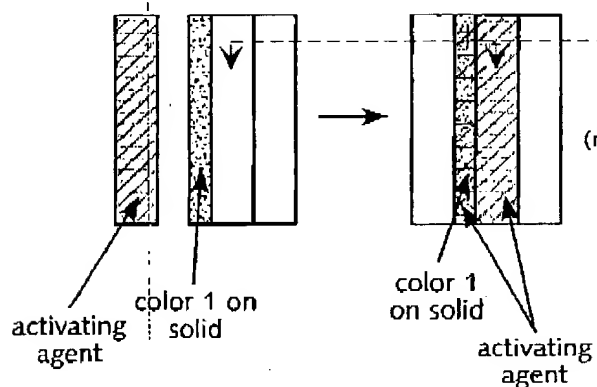
Case 2: without analyte exposure

Case 2: with analyte exposure

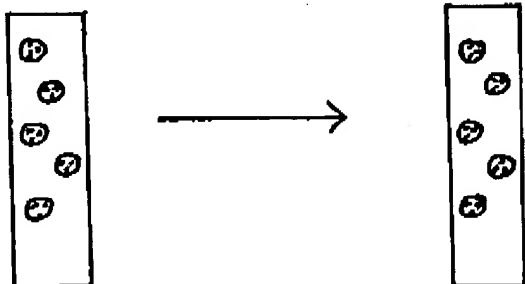


Case 3: without analyte exposure

Case 3: with analyte exposure



BURLEIGH



INSTANT INVENTION

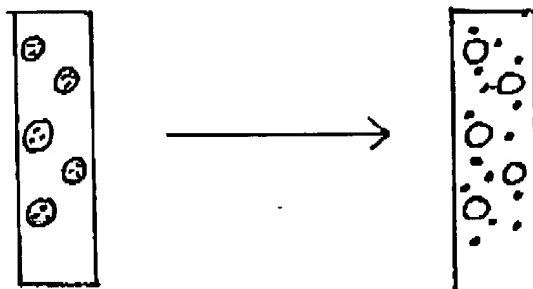


FIGURE B

Summary of Detection Mechanisms

| reference | movement of indicator dye | cause of dye migration | color change | solid present | solid involved in analyte response | chemical reaction required |
|---------------------|---------------------------|---|--------------|---------------|------------------------------------|----------------------------|
| instant application | Y | target analyte | N | Y | Y | N |
| Haas | Y | time | N | N | N | N |
| Burleigh | N | N/A - no migration | Y | Y | N | Y |
| Burleigh + Haas | Y | no migration*: color change in layer containing solid | Y | Y | N | Y |

* This represents Case 2 above